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## INTERNATIONAL COOPERATION IN THE PEACEFUL USES OF OUTER SPACE

### Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space

#### Report of the Secretary-General

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## I. INTRODUCTION

1. The General Assembly, in its resolution 47/67 of 14 December 1992, requested the Secretary-General to report to the Assembly at its forty-eighth session on the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82). 1/

2. In response to that request, the present report provides information on the progress made in the implementation of the recommendations of the Conference.

3. The Committee on the Peaceful Uses of Outer Space, its Scientific and Technical Subcommittee and the Working Group of the Whole to Evaluate the Implementation of the Recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space considered the question of the implementation of the recommendations of the Conference during their 1993 sessions. Accordingly, the information contained in the present report reflects primarily the result of the work of the Committee, whose report 2/ is also before the General Assembly.

## II. WORKING GROUP OF THE WHOLE TO EVALUATE THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE SECOND UNITED NATIONS CONFERENCE ON THE EXPLORATION AND PEACEFUL USES OF OUTER SPACE

4. The Working Group of the Whole was reconvened by the Scientific and Technical Subcommittee at its 1993 session in accordance with General Assembly resolution 47/67 to continue its work.

5. At its 1993 session, the Committee endorsed the recommendations of the Working Group of the Whole as contained in its report (A/AC.105/543, annex II) and recommended that the Working Group be reconvened in 1994 to continue its work.

## III. INTER-AGENCY COOPERATION

6. In paragraph 18 of its resolution 47/67, the General Assembly requested all organs, organizations and bodies of the United Nations system and other intergovernmental organizations working in the field of outer space or on space-related matters to cooperate in the implementation of the recommendations of the Conference. In that connection, the Committee noted with appreciation the participation in all stages of its work and that of its Scientific and Technical Subcommittee by representatives of United Nations bodies, the specialized agencies and other international organizations.

7. Several United Nations bodies and specialized agencies have extensive space-related programmes that are contributing to the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, particularly the United Nations Environment Programme (UNEP), the Food and Agriculture Organization of the United

Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU), the World Meteorological Organization (WMO), the International Maritime Organization (IMO) and the United Nations Industrial Development Organization (UNIDO). Details of these programmes can be found in the yearly reports of the Secretary-General on coordination of outer space activities within the United Nations system. The latest report (A/AC.105/524) contains an overview of the agencies' work programmes for 1993 and 1994.

8. The programmes and projects of the organizations of the United Nations system are coordinated at annual inter-agency meetings. The fifteenth session of the Inter-Agency Meeting on Outer Space Activities is scheduled to be held in October 1993 at ITU headquarters in Geneva.

#### IV. STUDIES

9. In response to the requests of the Working Group of the Whole at its sixth session, the Secretariat prepared and submitted to the Scientific and Technical Subcommittee at its thirtieth session, in 1993, the following reports and studies: "International cooperation in the peaceful uses of outer space - activities of Member States" (A/AC.105/523 and Add.1), "Applications of space technology for ocean resources development" (A/AC.105/535) and "Applications of space technology for remote and rural communications and broadcasting" (A/AC.105/536).

10. The Committee on the Peaceful Uses of Outer Space, in endorsing the recommendations of the Working Group of the Whole at its seventh session, noted that they called for the preparation of further studies and reports of relevance to the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

11. In addition, and in accordance with the recommendations of the Working Group, the Secretariat will also be preparing for submission to the Subcommittee at its 1994 session the following reports and studies: reports from Member States containing information on their national and cooperative international space activities, on their space activities subject to greater international cooperation, on their resources and technological capabilities in the fields of space activities for the promotion of cooperation in the peaceful uses of outer space, on safety of nuclear power sources (NPS), on NPS-debris collisions and on their national research on space debris; as well as technical studies prepared by the Secretariat on the use of low-Earth-orbiting satellites for communications, forest resources management, space applications for sustainable development and satellite-based radio broadcasting services (see also sect. VI below).

#### V. UNITED NATIONS PROGRAMME ON SPACE APPLICATIONS

12. In paragraph 7 of its resolution 37/90 of 10 December 1982, the General Assembly endorsed the recommendations of the Conference that the United Nations Programme on Space Applications should be directed towards seven specific objectives. The activities conducted in 1992 by the Programme and the plans for

the period 1993/94 to meet those objectives are contained in the report of the United Nations Expert on Space Applications (A/AC.105/533).

A. Training courses/workshops/conferences/symposia

13. Part of the activities carried out or planned under the Programme in 1993, in cooperation with other United Nations bodies, include the following training courses, seminars and workshops: a United Nations/European Space Agency (ESA) Training Course for African Francophone Countries on Applications of the European Remote Sensing Satellite (ERS-1) for Natural Resources, Renewable Energy and the Environment; the Third United Nations/Sweden Training Course on Remote Sensing Education for Educators, co-sponsored by the Government of Sweden; the United Nations Workshop on Space Communications for Development, co-sponsored by the Government of Greece; the United Nations Regional Conference on Space Science and Technology, co-sponsored by the Government of Indonesia; the United Nations/Office of the United Nations Disaster Relief Coordinator (UNDRO)/ESA Workshop on Applications of Space Technology to Combat Natural Disasters, co-sponsored by the Government of Mexico and ESA; the United Nations Regional Conference on Space Technology for Sustainable Development in Africa, organized in cooperation with the Government of Senegal; the Fifth United Nations Training Course on Remote Sensing Applications to Geological Sciences, co-sponsored by the Government of Germany, ESA and the Carl Duisberg Society; the United Nations/International Astronautical Federation (IAF)/ESA Symposium on Organizing Space Activities in Developing Countries: Resources and Mechanisms, co-sponsored by the Government of Austria, IAF, ESA and the Commission of the European Communities; the United Nations Workshop on Basic Space Science, co-sponsored by the Government of Nigeria and ESA; and the United Nations Workshop on the Use of Space Techniques for Monitoring and Control of the Desert Environment, co-sponsored by the Government of the Syrian Arab Republic.

14. In 1994, the following training courses, seminars, conferences and workshops are planned:

(a) The Fifth United Nations/Carl Duisberg Society/ESA Regional Training Course on Remote Sensing Applications to Geological Sciences, focusing on natural sources protection, organized in cooperation with the Government of Nepal, to be held at Lima, Peru;

(b) The Fourth United Nations/Sweden International Training Course on Remote Sensing Education for Educators, to be organized in cooperation with the Government of Sweden, to be held at Stockholm and Kiruna;

(c) A United Nations Microwave Remote Sensing Workshop, to be organized in cooperation with the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Government of China, and held at Beijing;

(d) A United Nations/UNDRO Regional Workshop on Space Technology to Combat Natural Disaster for the Benefit of Member States in the ECA region, organized in cooperation with the Government of Zimbabwe, to be held at Harare;

(e) A United Nations International Workshop on Basic Space Science in Development Programmes, organized in cooperation with the Government of Egypt, to be held at Cairo;

(f) A United Nations International Workshop on the Development and Design of Small Experimental Payloads, organized in cooperation with the Government of Spain, to be held at Madrid.

#### B. Development of indigenous capability

15. In accordance with both the recommendation of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space concerning the development of indigenous capabilities and resolution 47/67, in which the Assembly considered it particularly urgent that the United Nations should support the creation of adequate training centres at the regional level, the Secretariat has continued its efforts, undertaken as part of the United Nations Programme on Space Applications, to establish regional centres for space science and technology education in existing national or regional educational institutions in developing countries. The Secretariat has published an updated project document entitled "Centres for Space Science and Technology Education" (A/AC.105/534), which itemizes and summarizes, among other things, the activities which will be undertaken by these regional centres. In addition, it is also continuing consultations with regional commissions and the countries that have expressed interest in hosting such centres, as well as its discussions with Member States, United Nations Development Programme (UNDP) and other regional and international funding institutions on the question of the funding for the establishment of these centres.

16. The following countries have offered to host a centre in their respective region:

(a) In Africa: Ghana, Kenya, Morocco, Nigeria, Senegal and Zimbabwe;

(b) In Asia: China, India, the Islamic Republic of Iran, Malaysia, Pakistan, Sri Lanka and Thailand;

(c) In Latin America: Argentina, Brazil, Chile and Mexico;

(d) In the Middle East: Jordan, the Syrian Arab Republic and the United Arab Emirates;

(e) In Europe: Greece.

17. The Committee noted that an evaluation mission to Latin America and the Caribbean had been undertaken in 1992 with the participation of technical experts from Canada and Spain. A similar evaluation mission to potential host countries for a centre in Africa was undertaken in May 1993 with experts from France and Germany. Further evaluation missions to the Islamic Republic of Iran and the Economic and Social Commission for Western Asia (ESCWA) region will also be carried out in 1993, and to the countries of the Asian region, in early 1994.

C. Technical advisory services

18. In paragraph 7 (g) of its resolution 37/90, the General Assembly decided that the United Nations Programme on Space Applications should, upon request by Member States or any of the specialized agencies, be directed towards the provision or arrangements for provision of technical advisory services on space applications projects. With regard to that mandate, the Programme has provided or is providing assistance in the following areas:

(a) In collaboration with ESA, on a survey and selection of projects to receive remote-sensing data made available by ESA to African countries covered by ESA's two remote-sensing ground receiving stations, at Maspalomas, Spain, and Fucino, Italy;

(b) To the Government of Ecuador, in promoting regional cooperation, administration and funding of the ground receiving station at Cotopaxi, Ecuador (see sect. V.E below);

(c) To the Government of Chile, in the preparation of the Second Space Conference of the Americas;

(d) In cooperation with the Government of Nigeria, in organizing a seminar on space science and technology;

(e) In cooperation with the Government of the Islamic Republic of Iran, in a seminar on remote sensing of the environment and space applications;

(f) To the Government of the Republic of Korea, in the establishment of the Asia-Pacific Satellite Communications Conference;

(g) In cooperation with the Indian Ocean Marine Affairs Cooperation (IOMAC) in a programme on the development of remote sensing projects for coastal zone management and monitoring.

D. Long-term fellowships

19. In promoting the development of indigenous capability, the Programme will award 17 long-term fellowships for the in-depth training of participants from developing countries in the areas of research and applications in remote-sensing technology; research and training in geodesy, photogrammetry and remote sensing; space antennas and propagation; communications systems; remote sensing information systems; satellite meteorology; and remote sensing instrumentation. The following have renewed their offer of fellowships for the 1993-1994 period: the Governments of Brazil (10) and China (2), and ESA (5). The Government of Greece has also offered fellowships for 1993-1994.

E. Regional mechanisms of cooperation

20. In pursuance of General Assembly resolution 47/67, the Secretariat continued its efforts to strengthen the regional mechanisms of cooperation in carrying out various activities in the implementation of the recommendations of

the Conference, in particular those relating to the Programme on Space Applications.

21. In 1993, the Programme carried on, as it had in 1992, its close cooperation with the Government of Ecuador to promote cooperation between Ecuador and all the countries that are within the foot-print of the Cotopaxi Ground Receiving Station. Following consultations between satellite operators, data distributors and ground receiving station builders, a technical mission (1-9 March 1993) was undertaken to Colombia, Ecuador, Peru and Venezuela to assess the level of interest and expected commitments of Member States within the coverage area of the Cotopaxi Ground Receiving Station in order to determine the availability of support for the Station's continuous operation as a regional station. The mission concluded that the atmosphere in which a regional entity could be established to operate all aspects of the Cotopaxi Ground Receiving Station was currently very positive. Such cooperation should witness an agreement between all of these countries and ensure the continuous operation of the Cotopaxi Station, as well as the acquisition and delivery of data to those countries.

22. The establishment of regional centres for space science and technology education, the primary goal of which is to enhance the academic and professional capabilities as well as the technical infrastructure in space science and technology in the institutions in each region, is also viewed as being very much a part of the Secretariat's effort to strengthen regional mechanisms of cooperation (see sect. V.B above).

#### VI. INTERNATIONAL SPACE INFORMATION SERVICE

23. In paragraph 8 of its resolution 37/90, the General Assembly decided to establish an International Space Information Service, consisting initially of a directory of sources of information and data services to provide direction, upon request, to accessible data banks and information sources. With regard to that mandate, the International Space Information Service published Highlights in Space (A/AC.105/522), based on annual reports prepared by the Committee on Space Research (COSPAR) and the International Astronautical Federation (IAF); the fourth volume of Seminars of the United Nations Programme on Space Applications (A/AC.105/532), containing selected papers from the seminars, workshops and training courses of the Programme in 1992; Planetarium: A Challenge for Educators, based on the experience of people in the establishment and development of existing planetariums; and the third edition of the Directory on Education, Training, Research and Fellowship Opportunities in Space Science and Technology and its Applications (A/AC.105/548), listing institutions and the educational and research programmes offered, the facilities available, the prerequisite qualifications, financial information, fellowship opportunities and opportunities for international cooperation.

#### VII. VOLUNTARY CONTRIBUTIONS

24. In paragraph 10 of its resolution 37/90, the General Assembly appealed to all Governments to make voluntary contributions, either in money or in kind, towards carrying out the recommendations of the Conference. In his note verbale dated 11 March 1983, the Secretary-General brought that paragraph to the

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attention of Member States, particularly with respect to the newly mandated and expanded activities of the United Nations Programme on Space Applications. Member States and intergovernmental organizations which have responded to this appeal since the forty-seventh session of the General Assembly have been mentioned under appropriate headings in the report of the Committee on the Peaceful Uses of Outer Space. 2/

25. The Committee took note of the disappointment expressed by the developing countries at the lack of financial resources to implement fully the recommendations of the Conference. It noted also that the Special Political Committee\* of the General Assembly had acceded to its request that the General Assembly make an adequate budgetary allocation for the Programme, and that the Chairman of the Special Political Committee had conveyed that decision in a letter to the Chairman of the Fifth Committee of the General Assembly (A/C.5/47/51). On the recommendation of the Fifth Committee, the General Assembly, in resolution 47/219 of 23 December 1992, took note of the letter from the Chairman of the Special Political Committee. The Committee on the Peaceful Uses of Outer Space, at its 1993 session, expressed its hopes that "those recommendations and actions would be reflected in an adequate budget allocation for the Programme on Space Applications in the 1994-1995 budget." 3/

#### VIII. THIRD UNITED NATIONS CONFERENCE ON THE EXPLORATION AND PEACEFUL USES OF OUTER SPACE

26. In accordance with General Assembly resolution 47/67, the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Subcommittee continued at their 1993 sessions the discussion of the possibility of holding a third UNISPACE Conference in the near future, possibly in 1995, and preferably to be held in a developing country. In its report, the Committee requested the Scientific and Technical Subcommittee to review this matter further at its 1994 session, with a view to promoting an early conclusion. In particular, the Committee noted that the most important step was to define a set of sharply focused objectives for such a Conference, and that details such as organization, venue, timing and funding aspects should also be considered. The Committee also took note of the proposal made by the Government of India, as a developing country, to host a third UNISPACE conference at its Space Centre in Bangalore.

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\* Beginning with the forty-eighth session of the General Assembly, the Special Political Committee and the Fourth Committee were merged, to form the Special Political and Decolonization Committee (Fourth Committee) (General Assembly resolution 47/233 of 17 August 1993).

Notes

1/ See Report of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 9-21 August 1982 (A/CONF.101/10 and Corr.1 and 2).

2/ Official Records of the General Assembly, Forty-eighth Session, Supplement No. 20 (A/48/20).

3/ Ibid., para. 26.

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